

The invention claimed is:

1. An adjustable keyboard support mechanism, comprising:

a mounting bracket adapted for attachment to a support surface;

a platform having a forward portion and a rearward portion thereof disposed generally opposite the forward portion;

a support arm having a first end thereof pivotally coupled with the mounting bracket at a first point and slidably coupled with the mounting bracket at a second point, and a second end pivotally coupled with the platform at a third point; and

a locking mechanism, comprising:

a center arm having a first end slidably coupled to the mounting bracket at the second point, and pivotally coupled with the platform at the third point, such that the upwardly directed force exerted on the platform allows the center arm to slide with respect to the second point;

at least two planar frictional members sandwiching and frictionally engaging the center arm, such that the sliding movement of the center arm with respect to the second point is restricted,

a wedge member having an angled surface, and an abutment surface opposite the angled surface of the wedge member and adapted to abut one of the frictional members; and

a wedge arm having a first end pivotally coupled to the platform at a fourth point, and a second end slidably coupled to the mounting bracket at the second point such that the upwardly directed force exerted on the platform causes the wedge arm to slide with respect to the second point, the second end of the wedge arm

having an angled surface adapted to abut the angled surface of the wedge member such that sliding of the wedge arm due to the upwardly directed force exerted on the platform reduces a force exerted on the wedge member by the wedge arm and reduces the frictional engagement between the frictional members and the center arm, thereby allowing the center arm to slide with respect to the second point and the height of the platform to be adjusted relative to the support surface.

2. The adjustable keyboard support mechanism of claim 1, wherein the at least two planar frictional members include a plurality of interspaced washers and plate members, wherein the plate members are operably coupled to the center arm and are slidable with respect to the second point.

3. The adjustable keyboard support mechanism of claim 2, wherein the plurality of the washers and the plate members include at least six washers and at least six plate members equally distributed on opposite sides of the center arm.

4. The adjustable keyboard support mechanism of claim 3, wherein the locking mechanism further includes:

a spring member resiliently biasing the second point towards the fourth point.

5. The adjustable keyboard support mechanism of claim 4, wherein the spring member includes a coil spring.

6. The adjustable keyboard support mechanism of claim 5, further including:
a lift assist mechanism operably coupled to the mounting bracket and the support arm and adapted to assist an operator in applying the upwardly directed force to the platform.
7. The adjustable keyboard support mechanism of claim 1, wherein the at least two planar frictional members include a plurality of interspaced washers and plate members substantially equally distributed on opposite sides of the center arm.
8. The adjustable keyboard support mechanism of claim 1, wherein the locking mechanism further includes:
a spring member resiliently biasing the second point towards the fourth point.
9. The adjustable keyboard support mechanism of claim 8, wherein the spring member includes a coil spring.
10. The adjustable keyboard support mechanism of claim 1, further including:
a lift assist mechanism operably coupled to the mounting bracket and the support arm and adapted to assist an operator in applying the upwardly directed force to the platform.
11. An adjustable keyboard support mechanism, comprising:
a mounting bracket adapted for attachment to a support surface;
a support arm having a first end thereof operably coupled with the mounting bracket, and
a second end;

a platform having a first section having a forward portion and a rearward portion disposed generally opposite the forward portion and operably coupled to the second end of the support arm, and a second section having a forward portion and a rearward portion disposed generally opposite the forward portion of the second section and pivotably coupled to the forward portion of the first section at a first point; and

an adjustment mechanism having an actuator member defining a length and operably coupled with the first section of the platform, and a linking member operably coupled to the rearward portion of the second section of the platform at a second point and adjustable along the length of the actuator member such that an adjustment of the linking member along the length of the actuator member causes the platform to pivot about the first point, thereby adjusting a tilt of the second section of the platform relative to the support surface.

12. The adjustable keyboard support mechanism of claim 11, wherein the forward portion of the second section includes a pair of opposing flanges defining the second point, and wherein the linking member includes a pair of grooves on opposite sides thereof that slidably receive the flanges therein.

13. The adjustable keyboard support mechanism of claim 12, wherein the actuator includes a threaded shaft, and wherein the linking member is threadably coupled to the threaded shaft and adjustable along the length.

14. The adjustable keyboard support mechanism of claim 13, wherein the actuator includes a graspable head outwardly disposed from the platform.

15. The adjustable keyboard support mechanism of claim 14, further including:
a cover member housing at least a portion of the first section of the platform.
16. The adjustable keyboard support mechanism of claim 11, wherein the actuator includes a threaded shaft, and wherein the linking member is threadably coupled to the threaded shaft and adjustable along the length.
17. The adjustable keyboard support mechanism of claim 11, wherein the actuator includes a graspable head outwardly disposed from the platform.
18. The adjustable keyboard support mechanism of claim 14, further including:
a cover member housing at least a portion of the first section of the platform.
19. An adjustable keyboard support mechanism, comprising:
a mounting bracket adapted for attachment to a support surface;
a platform having a first section having a forward portion and a rearward portion disposed generally opposite the forward portion, and a second section having a forward portion and a rearward portion disposed generally opposite the forward portion of the second section and pivotally coupled to the forward portion of the first section at a first point; and
a support arm having a first end thereof pivotally coupled with the mounting bracket at a second point and slidably coupled with the mounting bracket at a third point, and a second end pivotally coupled with the platform at a fourth point;

a locking mechanism, comprising:

a center arm having a first end slidably coupled to the mounting bracket at the third point, and pivotally coupled with the platform at the fourth point, such that an upwardly directed force exerted on the platform allows the center arm to slide with respect to the third point;

at least two planar frictional members sandwiching and frictionally engaging the center arm, such that the sliding movement of the center arm with respect to the third point is restricted;

a wedge member having an angled surface, and an abutment surface opposite the angled surface of the wedge member and adapted to abut one of the frictional members; and

a wedge arm having a first end pivotally coupled to the platform at a fifth point, and a second end slidably coupled to the mounting bracket at the third point such that the upwardly directed force exerted on the platform causes the wedge arm to slide with respect to the third point, the second end of the wedge arm having an angled surface adapted to abut the angled surface of the wedge member such that sliding of the wedge arm due to the upwardly directed force exerted on the platform reduces a force exerted on the wedge member by the wedge arm and reduces the frictional engagement between the frictional members and the center arm, thereby allowing the center arm to slide with respect to the third point and the height of the platform to be adjusted relative to the support surface; and

a tilt adjustment mechanism having an actuator member defining a length and operably coupled with the first section of the platform, and a linking member operably coupled to the

rearward portion of the second section of the platform at a sixth point and adjustable along the length of the actuator member such that an adjustment of the linking member along the length of the actuator member causes second section of the platform to pivot about the first point, thereby adjusting a tilt of the second section of the platform relative to the support surface.